The prohibition against cosmetics which may be injurious to users under the conditions of use prescribed in the labeling or under such conditions as are customary or usual. However, poisonous coal tar hair dyes which would be exempted under the proviso of this requirement if they bore the warning label prescribed by the statute will not be subject to action by reason of their failure to hear the prescribed warning until ninety days after the date of approval.

SOCIALIZED MEDICINE: A RECENT POLL

On the basis of reply blanks received it would appear that approximately 66 per cent of the doctors of California are opposed to a reorganization of medical practice in the direction of socialized medicine, as revealed in the final results of a physician's referendum on socialized medicine conducted by *Modern Medicine*. A total of 16,711 ballots were cast by doctors throughout the nation, giving the greatest direct expression of medical opinion ever recorded on any topic whatsoever, and indicating that the trend of medical thought —except for New York City—is definitely away from socialized medicine, the editors announce.

On the question as to whether public funds should be used to pay the cost of medical care for the indigent and low income group, 54 per cent of California doctors replying voted in favor. However, 83 per cent of those who replied voted support of the present policies of the American Medical Association in studying all plans of making a high standard of medical care available to all people under the control of each community.

Of the specialists in California, 61 per cent of those who replied voted against reorganization, but of the general practitioners, about 68 per cent. Among replying doctors in metropolitan centers in California (cities over 50,000), 63 per cent voted against reorganization. Of the specialists, 58 per cent who answered the questionnaires favored the use of public funds to pay for medical care, while of the general practitioners, about 50 per cent.

The final results obtained in the publication's referendum on socialized medicine are at great variance with the recently published "Gallup poll," which, under the sponsorship of the American Institute of Public Opinion, reported that seven out of ten doctors favored the principle of health insurance. According to the *Modern Medicine* referendum, in which 16,711 doctors' votes gave a cross-section of medical opinion throughout the whole United States, active practicing doctors in the United States definitely oppose the reorganization of medical practice by a vote of two to one.

They reported that they knew of very few cases, not more than one in ten, where individuals or families, claiming inability to pay, were not getting whatever medical care a physician himself can provide. They showed a slight preference (55 per cent) for the use of public funds to pay for medical care for the indigent and low income groups. They strongly approved the present policy of the American Medical Association by a vote of 17 to 3.

This vote showed a definite trend of opinion among United States doctors away from socialized medicine. In 1935, in a similar survey conducted by *Modern Medicine*, 43 per cent of 6,044 doctors voted favoring a change in the administration of medical practice. In 1938, two out of three doctors among the 16,711 voting opposed reorganization.

Among doctors who replied yes to the question on the physicians' referendum which read: "Do you know of any case in your community where an individual or family, claiming inability to pay, has been refused whatever medical care a physician could provide?" many amplified their answers to the effect that the so-called "claim" of inability to pay was false and that care was sometimes refused to individuals who spent their money on luxuries, vacations, transportation, liquor and gambling while owing bills and telling the doctor they could not pay anything at all for his services.

The greatest opposition to reorganization of medical practice was found among country doctors and general practitioners who had been in practice for more than fifteen years. In this poll, reorganization of medical practice found most favor among general practitioners who were earning less than $3,000 a year, and who were practicing in large cities.—*Modern Medicine*, July, 1938.

POPULATIONS OF LARGER AMERICAN CITIES: STRIKING AGE CONTRASTS

A relative preponderance of elderly people is characteristic of most of the principal cities of the Pacific Coast states. In fact, according to the last census, there are more cities of elders in the Pacific Coast states than in any other main geographic division of the country. Of all our ninety-three large cities, that is, those which had more than 100,000 population in 1930, there are eighteen in which more than 6 per cent of the population in that year was in the age range 65 and over; and seven of these cities are in the three Pacific Coast states, four of them being in California.

Long Beach, Calif., with 9.2 per cent of its population over 65 years of age, is, in this sense, the oldest of America's large cities, although it is closely followed by San Diego, in the same state, with 9.1 per cent. These two cities, in fact, stand out from all the rest, as the third city in order is Spokane, Wash., with only 7 per cent of its population over 65 years. Tacoma, Wash., and Denver, Colo., are bracketed for fourth rank with 6.9 per cent. In New England there are three cities with a large contingent of old people, namely, Lowell, Lynn, and Somerville—all in Massachusetts. Cincinnati and Grand Rapids are the only representatives of the East North Central region; in the Middle Atlantic states there are four, namely, Albany, Reading, Rochester, and Utica; and in the West North Central group only one, namely, St. Paul.

The existing age distribution, as must be well known to our readers, is the result of a gradual drift towards older ages that has been taking place for many decades, due mainly to the declining birth rate, with consequent lessening in proportion of young people in the population. This is a general phenomenon observed in the population of this country at large, as well as abroad, and, with few exceptions, individual cities have shown a drift in the same direction. Which of the ninety-three large cities included in our table has registered the greatest increase in proportion of its older people, since the beginning of the present century, cannot be told, because ten of these cities were small places at the beginning of the century and we have no data regarding their age distribution at that time. However, of eighty-three cities for which it is possible to make comparison between 1900 and 1930, we find that Spokane leads in this respect, with an increase in the proportion of the population over age 65 from 1.9 per cent in 1900 to 7 per cent in 1930. In two other cities in the State of Washington—Tacoma and Seattle—the proportion of persons over 65 years of age practically tripled in thirty years, and the same is true of Duluth, Minn., which exhausts the list of cities showing a threefold or greater increase in the proportion of those 65 or more years old. Cities in which this proportion has doubled, or more than doubled, are Denver, Fall River, Kansas City (Kansas), Kansas City (Missouri), Minneapolis, Omaha, Portland (Oregon), and St. Paul.

There are only two large cities in the United States—Akron and Detroit—in which the proportion of persons 65 years and over has declined since 1900.

Gary, Indiana, is the country's youngest among all the cities of more than 100,000 population, with only 1.7 per cent of its inhabitants aged 65 years or over.

Special interest attaches to the five largest cities (those of more than 1,000,000 population). Detroit is by far the youngest, when measured by its proportion of old people—only 2.8 per cent. New York (3.8 per cent) is decidedly a young city, as is Chicago, with exactly 4 per cent. The Philadelphia population, with 5.1 per cent in the 65 and over group, is older, while Los Angeles, with 6.2 per cent, is the oldest among America's five largest cities.

Turning now from extremes to a consideration of what might be thought the most typical cities, namely, those at or around the middle of the list, in order of rank, we find five—Toledo, Salt Lake City, St. Louis, Paterson, and Kansas City (Kansas)—with the median of 5.2 per cent of persons 65 or more years old. It is interesting to observe that this comes very close to the general average for the United States population as a whole, that is, 5.4 per cent.

It will be noted that the cities with the highest contingents of old people are places distinguished by equable climate, and by the facilities for rest and recreation which these communities provide. Old people who have been able to retire and to live on private income, savings, retirement

funds, or annuities are wont to make such cities their permanent places of residence in their declining years. On the other hand, it is, for the most part, large industrial areas (like Gary, Birmingham, Detroit, Flint, and Akron, for example) which, in their rapid growth, and because of the opportunities that their industries offer, have attracted the young and vigorous in search of remunerative employment. —*Statistical Bulletin, Metropolitan Life Insurance Company.*

Per Cent of Population at Ages 65 and Over, In Certain Cities of the United States with a Total Population of 100,000 or More in 1930; Compared with Corresponding Percentages for the Same Cities in 1900, 1910 and 1920

City	Per Cent of Population at Ages 65 and Over			
	1930	1920	1910	1900
Long Beach, Calif.	9.2	10.9	....	....
San Diego, Calif.	9.1	9.2	7.8	....
Spokane, Wash.	7.0	4.6	2.6	1.9
Denver, Colo.	6.9	4.9	3.6	2.8
Portland, Ore.	6.6	4.7	3.2	2.5
Los Angeles, Calif.	6.2	6.2	4.8	4.4
Oakland, Calif.	6.1	5.2	4.9	5.0
Boston, Mass.	5.5	4.4	4.0	3.6
San Francisco, Calif.	5.4	4.3	3.8	4.0
Salt Lake City, Utah	5.2	4.0	3.3	3.8
St. Louis, Mo.	5.2	4.2	3.6	3.3
Philadelphia, Pa.	5.1	4.2	4.0	3.8
Miami, Fla.	4.5	3.4	....	....
New Orleans, La.	4.1	3.7	3.8	3.8
Chicago, Ill.	4.0	3.2	2.8	2.4
New York, N. Y.	3.8	3.1	2.8	2.8
Chattanooga, Tenn.	3.3	3.0	2.8	2.3

CARBON MONOXIDE HAZARDS IN TRAFFIC ACCIDENTS IN CALIFORNIA

The Industrial Hygiene Service of the California State Department of Public Health, Dr. John P. Russell, Chief, has issued a preliminary report covering the carbon monoxide hazard in relation to California highway traffic casualties. Doctor Russell was assisted in making the survey of such hazards by Sergeant George S. Zelk, Bureau of Commercial Equipment, California Highway Patrol, and Fred R. Ingram, Senior Engineer, Industrial Hygiene Service, California State Department of Public Health.

In 1937, out of 37,968 traffic accidents on California highways, 597 were attributed officially to "sleepiness" of the drivers of the vehicles involved. It is admitted that fatigue due to long hours of driving and insufficient rest contributes to sleepiness and the theory that the inhalation of engine exhaust gases is responsible in part at least for otherwise inexplicable accidents led to the making of the survey.

Determinations of carbon monoxide in drivers' compartments of motor vehicles were made in nine widely scattered areas of California. This work was conducted on ascending and descending grades, as well as on level highways, under varying weather conditions, including snow, rain and desert heat, at various hours of the day and night, in temperatures ranging from 21 degrees to 74 degrees Fahrenheit, and relative humidities ranging from 18 per cent to 97 per cent.

Most of the vehicles tested were trucks and busses, for the reason that they all fall into the industrial hygiene classification. At a later time, under other auspices, similar tests on passenger cars may be undertaken.

A total of 1,105 vehicles was tested in the survey, and in 2 per cent of the vehicles tested the carbon monoxide concentration was found to be 100 parts per million or higher. Such a concentration of carbon monoxide is sufficient, in some cases, to cause headache, sleepiness and impaired judgment, when inhaled over a period of six to eight hours. In vehicles where such high concentrations are found, potentially dangerous conditions exist, and it is essential that the source of the dangerously high concentration be discovered.

Generally, the defect was traced to one or more of the following defects in the exhaust system: loose exhaust pipe or manifold connection, blown-out exhaust gasket, cracked exhaust manifold, leaky muffler or faulty design of the exhaust system. Exhaust gases escaping from these defects may enter the driver's compartment in large quantities through openings in and around the cab without the driver being aware of their presence. Correction of defects in the exhaust system greatly reduces the amount of carbon monoxide to which the driver is exposed.

In an effort to correlate the effects of inhalation of engine exhaust gases with the ability to drive motor vehicles, five volunteers, including the writers, underwent a series of tests of their steering ability, perception and reaction time, eye-hand and eye-foot coördination, visual acuity, field of vision, depth perception, speed estimation, color vision and glare resistance, before and after the inhalation of known amounts of carbon monoxide during a four-day period.

These tests were made with the coöperation of the Division of Drivers' Licenses, State Department of Motor Vehicles, using instruments and apparatus assembled by them for measuring driving skill. The subjects were first given a series of tests on the instruments to reduce the learning or practice factor. Blood pressure and pulse readings were taken, and determinations of blood saturation with carbon monoxide by the pyrotannic acid method were made. The subjects then spent one hour in an improvised gas chamber, a closed sedan into which engine exhaust gas was introduced by means of a hose from the exhaust pipe. The concentration of carbon monoxide in the chamber, determined by the two carbon monoxide indicators used in the survey, was kept constant by admitting small amounts of exhaust gas from time to time to replace that which leaked out gradually. At the end of the period of exposure, blood samples were again tested, and driving tests were repeated. It was found that exposure to the gas had very little effect on blood pressure, pulse rate, steering ability, visual acuity, field of vision, color vision, depth perception, speed estimation or glare resistance.

The blood saturation readings are not considered reliable, due to inaccuracies in color standards which were not discovered until after the tests were made. However, they suggest that carbon monoxide when inhaled in small amounts day after day has a cumulative effect, and is not completely eliminated from the body in a few hours after exposure, as is commonly believed. Further tests along this line have been planned for the near future.

Braking time represents the interval, in hundredths of a second, elapsing between the appearance of a red light and the application of the brake by the subject, seated behind a set of standard automobile controls, following a moving road scene by manipulating the steering wheel. It was found that the inhalation of an amount of carbon monoxide considered equivalent to that breathed by the driver of a vehicle containing 100 parts per million of the gas during a six to nine hour driving period caused a diminution in driving ability as indicated by headache, muscular weakness and tremors, mental confusion, and a small but definite lengthening of braking time. It is believed that this effect is greatly increased by fatigue such as is experienced by drivers of motor vehicles, particularly heavy trucks or similar vehicles. Plans are being made to conduct further tests under conditions more closely approximating actual driving conditions in order to minimize the learning factor and to include the fatigue factor in combination with exposure to carbon monoxide.

Following are the conclusions reached by Doctor Russell as a result of this preliminary survey:

It is believed that many otherwise unexplained highway accidents, in which experienced drivers, traveling along a straight highway in broad daylight after a good night's rest, run off the road or crash head-on into an approaching vehicle, are due to the driver unknowingly breathing dangerous amounts of exhaust gases escaping from defects in the exhaust system of the vehicle he is operating.

In the absence of defects in the exhaust system, it is believed that there is little danger of carbon monoxide poisoning from engine exhaust gases while driving along the highway.

The exhaust systems of motor vehicles should be inspected carefully, and periodically, for any defects which permit the escape of exhaust gases before reaching the exhaust pipe outlet.

Such defects should be corrected immediately to protect the driver from exposure to dangerous concentrations of carbon monoxide in the escaping gases.

Drivers' compartments of motor vehicles should be fitted with tight floor mats to exclude exhaust gases which may enter through cracks around floor boards. Openings in the dash should be closed as tightly as possible.